

WHAT IS CLAIMED IS:

1. A spark plug for a cogeneration engine comprising:
- a tubular housing;
 - a central bar electrode supported by said tubular housing in
 - 5 said tubular housing with electrical insulation therebetween;
 - a first bar discharge member being arranged at one end of
 - said central bar electrode, comprising Ir alloy, and protruding from
 - one end of said tubular housing along an axis of said center
 - electrode;
 - 10 a plate ground electrode being arranged at said one end of
 - said tubular housing in a radial direction of said axis and having an
 - end surface confronting a side surface of said first bar discharge
 - member; and
 - a second discharge member being arranged on said end
 - 15 surface and having a surface confronting said side surface, spark
 - discharge being generated at a gap between said first and second
 - discharge members, wherein if it is assumed that a distance of said
 - gap is G, a width of said side surface in a normal direction of a plane
 - including said radial direction and said axis is D, and a width of said
 - 20 surface in said normal direction is A, G is equal to or greater than 0.2
 - mm and equal to or lower than 0.6 mm, D is equal to or greater than
 - 1.6 mm, $|A - D|$ is equal to or lower than a result of adding 0.5 mm
 - to G.
 - 25 2. A spark plug as claimed in claim 1, wherein D is equal to or lower
 - than 5.0 mm.

090342.062901
"24E6860"

3. A spark plug as claimed in claim 1, further comprising a weld
portion between said one end of said central electrode and said first
bar discharge member, wherein a maximum cross-sectional area of
said weld portion on a plane perpendicular to said axis is equal to or
5 lower than 8 mm².

4. A spark plug as claimed in claim 1, wherein said one end of said
central electrode is welded to a surface of said first bar discharge
member on the side of said central electrode.

10

5. A spark plug as claimed in claim 1, further comprising a weld
portion between said one end of said central electrode and said first
bar discharge member, said weld portion being provided by laser
welding, wherein said weld portion does not confront said surface of
15 said second discharge member, if it is assumed that a shortest
distance between said weld portion and said second discharge
member is L, L is equal to or greater than G.

6. A spark plug as claimed in claim 5, wherein L is equal to or
20 greater than a result of adding 0.2 mm to G.

7. A spark plug as claimed in claim 1, wherein each of said first and
second discharge members comprises Ir and at least one of Rh, Pt, Ru,
Pd, and W.

25

09893442.062901